

ABSTRACT OF THE DISCLOSURE

A liquid crystal on silicon (LCOS) panel in single-domain vertical alignment mode. The LCOS includes a front plate, a rear plate, and a liquid crystal layer. The rear plate includes a number of pixel electrodes and the pixel electrodes are grouped in pairs. Every two pairs of pixel electrodes are separated by a groove while the pixel electrodes in each pair are separated by a protrusion. The LCOS panel is filled with the liquid crystal layer, between the front and rear plates, while the liquid crystal molecules in the liquid crystal layer are in vertical alignment mode. By the configuration of the protrusions and grooves among the pixels of the LCOS panel, a single domain is readily formed in every pixel while high contrast ratio, reduced fringe field effect and effect of transverse electric field can be achieved.

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